

REMARKS

Applicant graciously appreciates the Office's attention to the instant application. In view of the following remarks, Applicant respectfully requests reconsideration and allowance of the subject application. This amendment is
5 believed to be fully responsive to all issues raised in the February 8, 2005 Final Office Action.

As explained above, claim 53 is currently amended and claims 27-28, 30-32, 34-37, 41-46, 47-48 and 50-55 are pending.

10 Claim Rejection Under 35 USC §112, ¶2

Applicant currently amends claim 53 to include inadvertently omitted language with respect to "the second mount". Applicant submits that a proper antecedent basis now exists for "the second mount" of claims 54 and 55.

15 Claim Rejection Under 35 USC §102(b): Kado

In the Final Office Action dated February 8, 2005, the Office rejected claims 27, 31, 34, 41-47 and 50 under 35 USC §102(b) as being anticipated by USPN 5,975,197 to Kado ("Kado reference"). Under 35 U.S.C. §102(b) "a claim is anticipated only if each and every element as set forth in the claim is found,
20 either expressly or inherently described, in a single prior art reference" (MPEP §2131). As explained below, Applicant submits that the Kado reference does not disclose each and every element of the aforementioned rejected claims.

Claims 27, 31, 34 and 41-46

Claim 27 recites, in part, “a *heat exchanger comprising . . . a fluid-permeable metal tube including a motion limiter attached thereto and extending*
5 *radially therefrom to limit upward or downward axial motion of the tube.*”

Applicant submits that the Kado reference does not disclose the “motion limiter” of claim 27. As stated in the detailed description at page 16, lines 22-25:

The mount 192 functions both to transfer loads from the inlet tube
10 170 to the strongback 143 and to allow a limited amount of movement of the inlet tube 170 relative to the strongback 143.

Allowing limited movement of the inlet tube 170 facilitates differential thermal expansion between the tube 170 and the strongback 143.

15 Specification at page 16, lines 22-25.

The Office refers to a “header cap 7” of the Kado reference. The Kado reference states:

The header cap is temporarily fixed to the end of the header pipe by, for example, a spot weld formed by MIG spot welding, to close
20 the end of the header pipe. Thereafter, the header cap, the side fin, and the side plate are integrally brazed in a furnace together with the entire heat exchanger.

Kado reference at col. 2, lines 19-24.

Applicant submits that such an arrangement does not allow for limited movement of the header pipe with respect to the various components, i.e., they are “integrally brazed”. Consequently, the Kado reference fails to disclose the “motion limiter” of claim 27.

Claims 31, 34 and 41-46 depend on claim 27 and are believed patentable over the Kado reference for at least the same reason.

Claims 31, 34 and 41-46 depend on claim 27 and, for at least the foregoing reason, Application submits that claims 27, 31, 34 and 41-46 are patentable over the Kado reference.

Claims 47 and 50

Claim 47 recites, in part, “*a heat exchanger comprising . . . a fluid-permeable metal tube having a length and including a motion limiter extending radially therefrom to limit upward or downward axial motion of the tube*”.

Applicant submits that the Kado reference does not disclose the “motion limiter” of claim 47. As stated in the detailed description at page 16, lines 22-25:

The mount 192 functions both to transfer loads from the inlet tube 170 to the strongback 143 and to allow a limited amount of movement of the inlet tube 170 relative to the strongback 143.

Allowing limited movement of the inlet tube 170 facilitates

differential thermal expansion between the tube 170 and the
strongback 143.

Specification at page 16, lines 22-25.

The Office refers to a "header cap 7" of the Kado reference. The Kado
5 reference states:

The header cap is temporarily fixed to the end of the header pipe
by, for example, a spot weld formed by MIG spot welding, to close
the end of the header pipe. Thereafter, the header cap, the side
fin, and the side plate are integrally brazed in a furnace together
10 with the entire heat exchanger.

Kado reference at col. 2, lines 19-24.

Applicant submits that such an arrangement does not allow for limited
movement of the header pipe with respect to the various components, i.e., they
are "integrally brazed". Consequently, the Kado reference fails to disclose the
15 "motion limiter" of claim 47.

Claim 50 depends on claim 47 and, for at least the foregoing reason,
Application submits that claims 47 and 50 are patentable over the Kado
reference.

20 Claim Rejection Under 35 USC §102(b): Lefeber

In the Final Office Action dated February 8, 2005, the Office rejected
claims 27, 28, 30-32, 34, 41-48 and 50-52 under 35 USC §102(b) as being

anticipated by USPN 4,967,835 to Lefebvre ("Lefebvre reference"). Under 35 U.S.C. §102(b) "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference" (MPEP §2131). As explained below, Applicant submits that

5 the Lefebvre reference does not disclose each and every element of the aforementioned rejected claims.

Claims 27, 30, 31, 34, and 41-46

Claim 27 recites, in part, "*a heat exchanger comprising . . . a fluid-*

10 *permeable metal tube including a motion limiter attached thereto and extending radially therefrom to limit upward or downward axial motion of the tube.*"

Applicant submits that the Lefebvre reference does not disclose the "motion limiter" of claim 27. As stated in the detailed description at page 16, lines 22-25:

15 The mount 192 functions both to transfer loads from the inlet tube 170 to the strongback 143 and to allow a limited amount of movement of the inlet tube 170 relative to the strongback 143.

Allowing limited movement of the inlet tube 170 facilitates differential thermal expansion between the tube 170 and the

20 strongback 143.

Specification at page 16, lines 22-25.

The Office refers to item 50 of the Lefebvre reference as a “motion limiter”. Applicant disagrees. The Lefebvre reference states:

Turning now to FIG. 3, the mounting adaptor 18 is seen in greater detail. Adjacent the threaded end 22, the same includes a
5 hexagonal shoulder 50 by which the adapter 18 may be rotated with a suitable wrench to thread the end 20 into the engine block.

The shoulder 50 also bears against the face 26 of the housing 28 of the heat exchanger to locate the same in place.

Lefebvre reference at col. 3, lines 51-57.

10 Applicant submits that the shoulder 50 does not act as a motion limiter to limit upward or downward axial motion of the tube. In particular, Applicant submits that there is no evidence that the shoulder 50 could possibly limit upward motion. Threads 22 exist above the shoulder 50 and, as shown in Fig. 1 of the Lefebvre reference, the threads 22 engage an oil filter 14 (col. 2, lines
15 23-28). Applicant submits that in such an arrangement, the shoulder 50 is fixed by engagement of the threads 22 in the oil filter 14. Further, a seal 24 carried by the oil filter 14 sealingly engages the face 26 of the housing 28 for the heat exchanger 16 (col. 2, lines 36-38). If the shoulder 50 moved axially upward, it is likely that the seal 24 would be breached and leakage of oil would occur.

20 Claims 30, 31, 34, and 41-46 depend on independent claim 27 and, for at least the foregoing reason, Applicant submits that claims 27, 30, 31, 34 and 41-46 are patentable over the Lefebvre reference.

Claim 28

Claim 28 depends on claim 27 and recites "*wherein the first mount is adjustable to allow the tube to expand separately from the load bearing member.*" Applicant submits that the Lefebvre reference does not disclose such a mount. In particular, the shoulder 50, which is integral to the threaded "tube", "bears against the face 26 of the housing 28 of the heat exchanger to locate the same in place" (col. 3, 55-57). Thus, the shoulder 50 remains in contact with the face 26, which the Office has identified as a load bearing member. For at least the foregoing reason, Applicant submits that claim 28 is patentable over the Lefebvre reference.

Claim 32

Claim 32 depends on claim 27 and recites "*wherein the first mount comprises: a channel defined by the load bearing member, wherein the motion limiter is received by the channel such that the movement of the motion limiter is restrained by the channel.*" Applicant submits that the Lefebvre reference does not disclose such a mount. In particular, the heat exchanger 16 does not have a "channel" such that movement of the shoulder 50 is restrained by the "channel". As already mentioned with respect to Fig. 2 of the Lefebvre reference, the oil filter 14 engages the threads 22, which arguably forms a "channel" between the face 26 and a bottom surface of the oil filter 14.

However, the shoulder 50 is fixed in relationship to the oil filter 14 via the threads 22. For at least the foregoing reason, Applicant submits that claim 32 is patentable over the Lefebvre reference.

5 *Claims 47, 50 and 51*

Claim 47 recites, in part, "*a heat exchanger comprising . . . a fluid-permeable metal tube having a length and including a motion limiter extending radially therefrom to limit upward or downward axial motion of the tube*".

Applicant submits that the Lefebvre reference does not disclose the "motion
10 limiter" of claim 47. As stated in the detailed description at page 16, lines 22-25:

The mount 192 functions both to transfer loads from the inlet tube 170 to the strongback 143 and to allow a limited amount of movement of the inlet tube 170 relative to the strongback 143.

15 Allowing limited movement of the inlet tube 170 facilitates differential thermal expansion between the tube 170 and the strongback 143.

Specification at page 16, lines 22-25.

The Office refers to item 50 of the Lefebvre reference as a "motion
20 limiter". Applicant disagrees. The Lefebvre reference states:

Turning now to FIG. 3, the mounting adaptor 18 is seen in greater detail. Adjacent the threaded end 22, the same includes a

hexagonal shoulder 50 by which the adapter 18 may be rotated
with a suitable wrench to thread the end 20 into the engine block.

The shoulder 50 also bears against the face 26 of the housing 28 of
the heat exchanger to locate the same in place.

5 Lefebvre reference at col. 3, lines 51-57.

Applicant submits that the shoulder 50 does not act as a motion limiter to
limit upward or downward axial motion of the tube. In particular, Applicant
submits that there is no evidence that the shoulder 50 could possibly limit
upward motion. Threads 22 exist above the shoulder 50 and, as shown in Fig.
10 1 of the Lefebvre reference, the threads 22 engage an oil filter 14 (col. 2, lines
23-28). Applicant submits that in such an arrangement, the shoulder 50 is fixed
by engagement of the threads 22 in the oil filter 14. Further, a seal 24 carried
by the oil filter 14 sealingly engages the face 26 of the housing 28 for the heat
exchanger 16 (col. 2, lines 36-38). If the shoulder 50 moved axially upward, it is
15 likely that the seal 24 would be breached and leakage of oil would occur.

Claims 50 and 51 depend on independent claim 47 and, for at least the
foregoing reason, Applicant submits that claims 47, 50 and 51 are patentable
over the Lefebvre reference.

20 *Claim 48*

Claim 48 depends on claim 47 and recites "*wherein the first mount
comprises: a channel defined by the load bearing member, wherein the motion*

limiter is received by the channel such that the movement of the motion limiter is restrained by the channel". Applicant submits that the Lefebvre reference does not disclose such a mount. In particular, the heat exchanger 16 does not have a "channel" such that movement of the shoulder 50 is restrained by the

5 "channel". As already mentioned with respect to Fig. 2 of the Lefebvre reference, the oil filter 14 engages the threads 22, which arguably forms a "channel" between the face 26 and a bottom surface of the oil filter 14. However, the shoulder 50 is fixed in relationship to the oil filter 14 via the threads 22. For at least the foregoing reason, Applicant submits that claim 48 is

10 patentable over the Lefebvre reference.

Claim 52

Claim 52 recites, in part, "*a heat exchanger comprising . . . a fluid-permeable metal tube having a length and including a motion limiter extending*

15 *radially therefrom to limit upward or downward axial motion of the tube*".

Applicant submits that the Lefebvre reference does not disclose the "motion limiter" of claim 52. As stated in the detailed description at page 16, lines 22-25:

The mount 192 functions both to transfer loads from the inlet tube

20 170 to the strongback 143 and to allow a limited amount of movement of the inlet tube 170 relative to the strongback 143.

Allowing limited movement of the inlet tube 170 facilitates

differential thermal expansion between the tube 170 and the strongback 143.

Specification at page 16, lines 22-25.

The Office refers to item 50 of the Lefebvre reference as a “motion
5 limiter”. Applicant disagrees. The Lefebvre reference states:

Turning now to FIG. 3, the mounting adaptor 18 is seen in greater detail. Adjacent the threaded end 22, the same includes a hexagonal shoulder 50 by which the adapter 18 may be rotated with a suitable wrench to thread the end 20 into the engine block.

10 The shoulder 50 also bears against the face 26 of the housing 28 of the heat exchanger to locate the same in place.

Lefebvre reference at col. 3, lines 51-57.

Applicant submits that the shoulder 50 does not act as a motion limiter to limit upward or downward axial motion of the tube. In particular, Applicant
15 submits that there is no evidence that the shoulder 50 could possibly limit upward motion. Threads 22 exist above the shoulder 50 and, as shown in Fig. 1 of the Lefebvre reference, the threads 22 engage an oil filter 14 (col. 2, lines 23-28). Applicant submits that in such an arrangement, the shoulder 50 is fixed by engagement of the threads 22 in the oil filter 14. Further, a seal 24 carried
20 by the oil filter 14 sealingly engages the face 26 of the housing 28 for the heat exchanger 16 (col. 2, lines 36-38). If the shoulder 50 moved axially upward, it is likely that the seal 24 would be breached and leakage of oil would occur.

For at least the foregoing reason, Applicant submits that claim 52 is patentable over the Lefebre reference.

Conclusion

5 Pending claims 27-28, 30-32, 34-37, 41-46, 47-48 and 50-55 are pending are believed to be in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the present application. Should any issue remain that prevents immediate issuance of the application, the Examiner is encouraged to contact the undersigned attorney to discuss the
10 unresolved issue.

Respectfully Submitted,

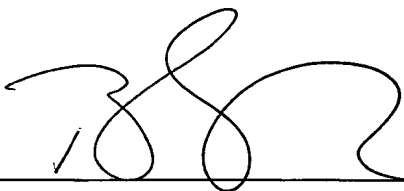
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